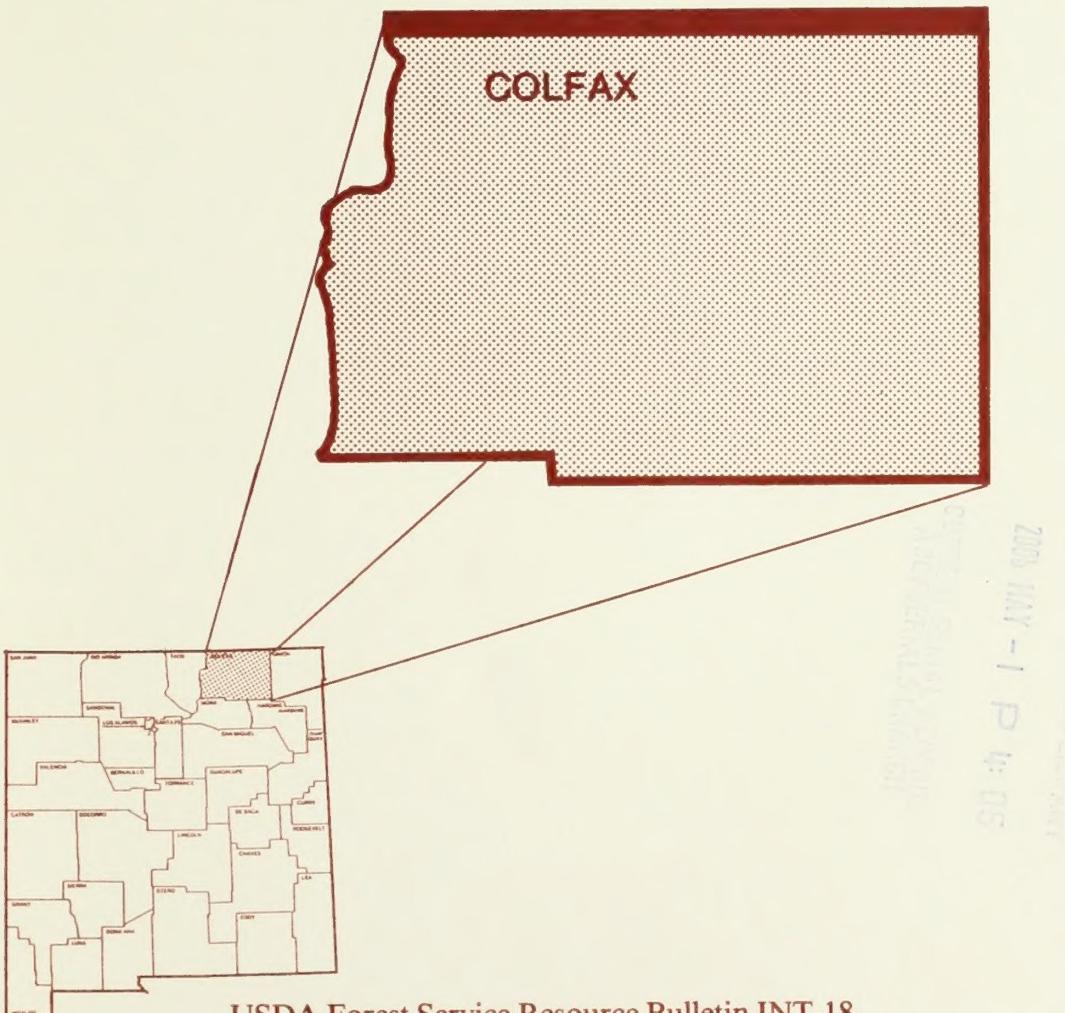


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FOREST AREA AND TIMBER RESOURCE STATISTICS FOR COLFAX COUNTY, NEW MEXICO, 1976

MICHAEL K. BARRETT
and
DOROTHY G. SHUPE



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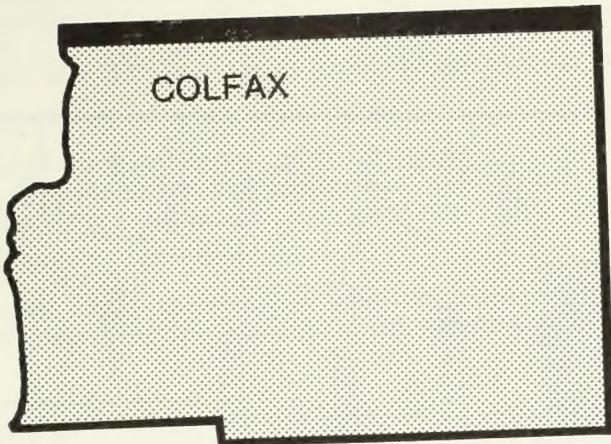
RESEARCH SUMMARY

Presents land area, commercial timberland area, timber inventory, and growth and mortality data based on Resources Evaluation standards.

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Colfax County



INTRODUCTION

A comprehensive timber resource study was conducted on State and private lands in Colfax County, New Mexico (fig. 1) from 1975 to 1976 by the New Mexico Department of State Forestry in cooperation with the Division of State and Private Forestry, Forest Service, Region 3, and the Intermountain Forest and Range Experiment Station.

The total land area in Colfax County is 2,408,960 acres (974,876 hectares). The Forest Service and the Bureau of Land Management together manage 12,039 acres (4,872 hectares), only about one-half of one percent of this land. The remaining 2,396,921 acres (970,004 hectares) are in State, private, and other ownerships. The data presented here are for State, private, and County and municipal lands only.

Highlights show the area of commercial timberland in comparison to total forest land area, and the distribution of this area by forest type, stand-size class, and site class. Discussions of the data reliability and terminology are included. These two items should be reviewed carefully when using this information.

NEW MEXICO

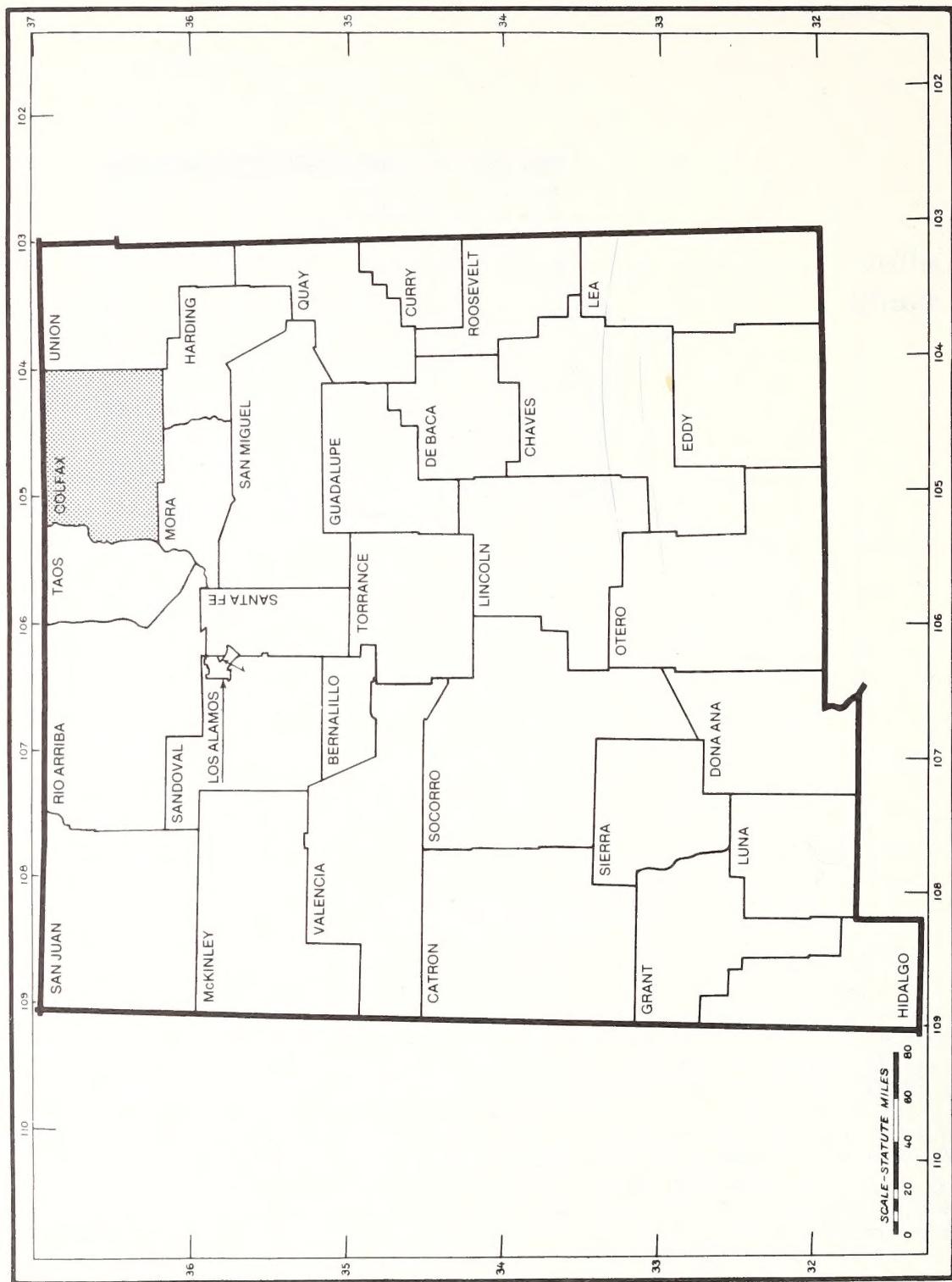


Figure 1.--Location of Colfax County in New Mexico.

HIGHLIGHTS

Area

- The forest land area is 883,803 acres (357,664 hectares), or 37 percent of the total State and private land area in the County.
- Of the forest land, 532,433 acres (215,469 hectares), or 60 percent are classified as commercial timberland.
- Private ownership accounts for 474,063 acres (191,847 hectares), or 89 percent of the commercial timberland.
- The predominant forest types are ponderosa pine, Douglas-fir, and Engelmann spruce which together occupy 81 percent of the commercial timberland. The remaining area consists of pinyon-juniper,¹ aspen, spruce-subalpine fir, and white fir forest types.
- Sixty percent of the commercial timberland is sawtimber stands; poletimber stands occupy 21 percent; the remaining 19 percent is in sapling and seedling stands and nonstocked.
- Nearly 90 percent of the commercial timberland is in the 20 to 49 cubic-foot productivity class.

Inventory

- Growing stock volume amounts to 311,917 thousand cubic feet (8,833 thousand cubic meters) with the major portion, about 70 percent, in softwood sawtimber trees.
- Rough, rotten, and salvable dead trees comprised 30,279 thousand cubic feet (857 thousand cubic meters), or 8.8 percent, of the total sound wood volume.
- About 90 percent of the 1,068,065 thousand board feet² of sawtimber volume is in sawtimber trees less than 21 inches d.b.h.
- Ponderosa pine and Engelmann spruce together make up 65 percent of the growing stock volume and 74 percent of the sawtimber volume. Species sharing the remaining percentage are Douglas-fir, white fir, subalpine fir, aspen, pinyon pine, juniper, and limber pine. Pinyon and juniper account for less than 2 percent of the total growing stock volume.
- About 87 percent of the softwood growing stock volume and 88 percent of the softwood sawtimber volume is privately owned.

¹The area occupied by pinyon-juniper forest type classified as commercial is so classified because the site index for other associated species on these stands (usually ponderosa pine or Douglas-fir) was high enough to indicate a site potential productivity level exceeding 20 cubic feet per acre per year average annual growth, and nonstockable indicators were not present in sufficient quantities to lower the yield capability below 20 cubic feet per acre per year. Although pinyon/juniper usually occurs on unproductive forest land, when it occurs in mixtures with other species on productive sites, it is reported in the commercial timberland statistics.

²International 1/4-inch rule.

Growth and Mortality

- Net annual growth of growing stock totaled 8,144,792 cubic feet (230,635 cubic meters) with 89 percent occurring in softwood species; mainly ponderosa pine, Engelmann spruce, and Douglas-fir. Growth and mortality were not measured for pinyon and juniper trees.
- About 87 percent of the total net growth is on private land.
- The annual mortality of 556,007 cubic feet (15,744 cubic meters) offsets 6.4 percent of the gross annual growth.
- Fire and logging activity accounted for 37 percent of the mortality.
- Over 70 percent of the mortality occurs in ponderosa pine.

DATA RELIABILITY

Individual cells within tables should be used with caution. Some are based on very small sample sizes, and so result in high sampling errors. The standard error percents shown in tables 1 and 2 were calculated at the 67 percent confidence level.

Table 1.--Area of forest land and percent standard error for Colfax County, 1976

Item	Softwood types		Hardwood types		All types	
	: Percent:		: Percent:		: Percent:	
	Acres	: standard:	Acres	: standard:	Acres	: standard:
	: error :		: error :		: error :	
Commercial timberland	496,538	5.8	35,895	41.4	532,433	4.9
Other forest land	193,480	11.7	157,890	12.7	351,370	8.3

Table 2.--Net volume and net annual growth and annual mortality of growing stock and sawtimber on commercial timberland, with percent standard error for Colfax County, 1976

Item	Softwoods		Hardwoods		All species	
	: Percent:		: Percent:		: Percent:	
	Volume	: standard:	Volume	: standard:	Volume	: standard:
	: error :		: error :		: error :	
<i>Net volume:</i>						
Growing stock (M cubic feet)	284,166	9.6	27,751	45.1	311,917	9.6
Sawtimber (M board feet ¹)	1,040,069	11.7	27,996	56.0	1,068,065	11.5
<i>Net annual growth:</i>						
Growing stock (cubic feet)	7,257,000	10.3	887,792	34.8	8,144,792	10.4
Sawtimber (board feet ¹)	31,198,284	14.0	650,232	53.2	31,848,516	13.7
<i>Annual mortality:</i>						
Growing stock (cubic feet)	556,007	42.8	--	0	556,007	42.8
Sawtimber (board feet ¹)	1,994,652	48.6	--	0	1,994,652	48.6

¹ International 1/4-inch rule.

TERMINOLOGY AND DATA TABLES

The following terminology section contains definitions that are relevant to the timber resource data presented in this resource bulletin. Forest area and timber resource data for Colfax County, New Mexico, are displayed in tables 3 through 23.

TERMINOLOGY

Land

Bureau of the Census.--The area of dry land and land temporarily or partly covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, estuaries, and canals less than 1/8 of a statute mile in width; and lakes, reservoirs, and ponds less than 40 acres in area.

Water

Census water.--As defined by the Bureau of the Census: streams, sloughs, estuaries, and canals more than 1/8 of a statute mile in width; and lakes, reservoirs, and ponds more than 40 acres in area.

Noncensus water.--The same as defined by the Bureau of the Census, except minimum width of streams, etc., is 120 feet and minimum size of lakes, etc., is 1 acre.

Land Use Classes

Forest land.--Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use.

Commercial timberland.--Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization. (Note: Areas qualifying have the capability of producing in excess of 20 cubic feet per acre per year of industrial wood under management. Currently inaccessible and inoperable areas are included, except when the areas involved are small and unlikely to become suitable for production of industrial wood in the foreseeable future.)

Productive-reserved forest land.--Forest land sufficiently productive to qualify as commercial timberland, but withdrawn from timber utilization through statute, administrative designation, or exclusive use for Christmas tree production.

Other forest land.--(1) Forest land incapable of producing 20 cubic feet per acre of industrial wood under management, because of adverse site conditions; (2) unproductive-reserved forest land.

Nonforest land.--Land that has never supported forests and lands formerly forested where use for timber management is precluded by development for other uses.

Public Ownership Classes

National Forest land.--Federal lands legally designated as National Forest or purchase units, and other lands under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III lands.

Bureau of Land Management lands.--Federal lands administered by the Bureau of Land Management.

Indian lands.--Tribal lands held in fee by the Federal Government, but administered for Indian tribal groups and Indian trust allotments.

State lands.--Lands owned by States, or lands leased to these governmental units for 50 years or more.

Private Ownership Classes

County and municipal lands.--Lands owned by counties and local public agencies or municipalities, or lands leased to these governmental units for 50 years or more.

Forest industry lands.--Lands owned by companies or individuals operating wood-using plants.

Farmer-owned lands.--Lands owned by farm operators. (Note: These exclude lands leased by farm operators from nonfarm owners, such as railroad companies and States.)

Miscellaneous Federal lands.--Federal lands other than the following: (1) National Forest lands; (2) lands administered by the Bureau of Land Management; and (3) Indian lands.

Miscellaneous private lands.--Privately owned lands other than forest industry and farmer-owned lands.

Forest Type and Tree Species

Forest types.--A classification of forest land based upon the species forming a plurality of live-tree stocking.

Forest trees.--Woody plants having a well-developed stem and usually more than 12 feet in height at maturity.

Commercial species.--Tree species presently or prospectively suitable for industrial wood products.

Softwoods.--Coniferous trees, usually evergreen, having needles or scalelike leaves.

Hardwoods.--Dicotyledonous trees, usually broad-leaved and deciduous.

Area Condition Classes

Stocking.--Stocking is an effort to express the extent to which growing space is effectively utilized by present or potential growing stock trees of commercial species. "Percent of stocking" is synonymous with "percentage of growing space occupied" and means the ratio of actual stocking to full stocking for comparable sites and stands. Basal area is used as a basis for measuring stocking.

"Stocking percentages" express current area occupancy in relation to specified standards for full stocking based on number, size, and spacing of trees considered necessary to fully utilize the forest land.

Full utilization of the site is assumed to occur over a range of basal area. As an interim guide 60 percent of the normal yield table values has been used to establish the lower limit of the range, which represents full-site occupancy. This is called 100-percent stocking. The upper limit of full stocking has been set at 132 percent. Sites with less than 100-percent stocking represent understocking with less than full-site occupancy. Overstocking is characterized by sites with over 133-percent stocking.

Class 10.--Area fully stocked (100-132 percent) with desirable trees and not overstocked (133 percent or more).

Class 20.--Area fully stocked with desirable trees, but overstocked with all live trees.

Class 30.--Areas medium to fully stocked (60-99 percent) with desirable trees and with less than 30 percent of the area controlled by other trees and (or) inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

Class 40.--Areas medium to fully stocked with desirable trees and with 30 percent or more of the area controlled by other trees and (or) conditions that ordinarily prevent occupancy by desirable trees.

Class 50.--Areas poorly stocked (16.7-59 percent) with desirable trees, but fully stocked with growing stock trees.

Class 60.--Areas poorly stocked with desirable trees, but with medium to full stocking of growing stock trees.

Class 70.--Areas nonstocked (less than 16.7 percent) or poorly stocked with desirable trees, and poorly stocked with growing stock trees.

Class 80.--Low-risk old-growth stands.

Class 90.--High-risk old-growth stands.

Nonstocked.--Areas less than 16.7 percent stocked with growing stock trees.

Class of Timber

Growing stock trees.--Live trees of commercial species qualifying as desirable or acceptable trees. (Note: Excludes rough, rotten, and dead trees.)

Desirable trees.--Growing stock trees (a) having no serious defect in quality limiting present or prospective use for timber products; (b) of relatively high vigor; and (c) containing no pathogens that may result in death or serious deterioration before rotation age.

Acceptable trees.--Growing stock trees that meet specified standards of size and quality, but not qualifying as desirable trees.

Rough trees.--(1) Live trees of commercial species that do not contain at least one 12-foot saw log or two noncontiguous saw logs, each 8 feet long or longer, now or prospectively, and (or) do not meet Rocky Mountain Regional specifications for freedom from defect primarily because of roughness or poor form; (2) all live trees of non-commercial species.

Rotten trees.--Live trees that do not contain at least one 12-foot saw log or two noncontiguous saw logs, each 8 feet long or longer, now or prospectively, and (or) do not meet Rocky Mountain Regional specifications for freedom from defect primarily because of rot; that is, when more than 50 percent of the cull volume (cubic-foot basis) in a tree is rotten.

Cull.--Portions of a tree that are unusable for industrial wood products because of rot, form, or other defect.

Salvable dead trees.--Standing or down dead trees that are considered merchantable by Rocky Mountain Regional standards.

Mortality trees.--Trees, formerly growing stock, dying from natural causes during a specified period, usually 1 year.

Saw-log portion.--That part of the bole of sawtimber trees between the stump and the saw-log top. A 1-foot stump is used.

Upper-stem portion.--That part of the bole of sawtimber trees above the saw log top to a minimum top diameter of 4.0 inches outside bark or to the point where the central stem breaks into limbs, whichever occurs first.

Tree Size Classes

Seedlings.--Live trees less than 1.0 inch in diameter at breast height.

Saplings.--Trees 1.0-4.9 inches in diameter at breast height.

Poletimber trees.--Trees at least 5.0 inches in d.b.h., but smaller than sawtimber size.

Sawtimber trees.--Trees exceeding poletimber size. In the Intermountain States, the minimum d.b.h. for softwood sawtimber is 9.0 inches, and 11.0 inches for hardwoods.

Volume

Net volume.--Gross volume less deductions for rot, sweep, or other defect affecting use for timber products.

Growing stock volume.--Net volume in cubic feet of live sawtimber trees and live poletimber trees from stump to a minimum 4.0-inch top (of central stem) outside bark. Net volume equals gross volume less deduction for rot and missing bole sections.

Sawtimber volume.--Net volume in board feet of sawtimber trees of commercial species. Net volume equals gross volume less deduction for rot, sweep, crook, and other defects that affect use for lumber.

Growth and Mortality

Net annual growth.--The increase in net growing stock volume of a specified size class for a specific year. (Note: Components of net annual growth include the increment in net volume of trees at the beginning of the specific year surviving to its end, plus net volume of trees reaching the size class during the year, minus the net volume of trees that died during the year, minus the net volume of trees that became rough or rotten trees during the year.)

Mortality.--Number or sound-wood volume of growing stock trees dying from natural causes during a specified period.

Site

Site class.--A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

Site classifications are based upon the mean net annual growth of growing stock (not including thinnings or mortality loss) attainable at culmination of mean net annual growth over age. Height-age relationships are usually used as indicators of the specified volume-site class.

Stand-Size Classes

Sawtimber stands.--Stands at least 16.7 percent stocked with growing stock trees, with half or more of total stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands.--Stands at least 16.7 percent stocked with growing stock trees in which half or more of this stocking is in poletimber and (or) sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

Sapling-seedling stands.--Stands at least 16.7 percent stocked with growing stock trees in which more than half of the stocking is saplings and (or) seedlings.

Nonstocked land.--Commercial timberland less than 16.7 percent stocked with growing stock trees.

FOREST SURVEY TABLES

Table 3.--Total area in Colfax County by ownership class, 1976

Ownership class	:	Acres	:	Hectares
National Forest ¹		11,778		4,766
Bureau of Land Management		261		106
Indian		--		--
State		282,600		114,365
Private and other		2,114,321		855,639
Total land area		2,408,960		974,876
Census water		4,544		1,839
Gross area ²		2,413,504		976,715

¹Includes National Grasslands administered by National Forest Systems.

²U.S. Bureau of the Census, land and water area of the United States, 1970.

Table 4.--Land area in Colfax County by major land class and ownership class, 1976

Land class	Ownership class						
	State		Private ¹				
	Acres	:	Hectares	:	Acres	:	Hectares
Commercial timberland	58,370		23,622		474,063		191,847
Productive reserved	--		--		--		--
Other forest land:							
Unproductive reserved	--		--		--		--
Unproductive nonreserved	35,444		14,344		315,926		127,851
Total forest land	93,814		37,966		789,989		319,698
Nonforest land	188,786		76,399		1,324,332		535,941
Total land area	282,600		114,365		2,114,321		855,639

¹On this and all later tables, the private ownership category includes a negligible portion of county and municipal ownership.

Table 5.--Area of commercial timberland in Colfax County by forest type, stand-size class, and site class, State owned, 1976

Forest type and stand-size class	Site class					Total acres
	: 165+	: 120-164	: 85-119	: 50-84	: 20-49	
- - - - - Acres - - - - -						
Douglas-fir:						
Sawtimber	--	--	--	--	2,544	2,544
Poletimber	--	--	--	1,330	3,991	5,321
Sapling and seedling	--	--	--	--	2,826	2,826
Nonstocked	--	--	--	--	--	--
Total	--	--	--	1,330	9,361	10,691
Ponderosa pine:						
Sawtimber	--	--	--	--	18,254	18,254
Poletimber	--	--	--	--	4,658	4,658
Sapling and seedling	--	--	--	--	654	654
Nonstocked	--	--	--	--	2,268	2,268
Total	--	--	--	--	25,834	25,834
Spruce-subalpine fir:						
Sawtimber	--	--	--	1,330	--	1,330
Poletimber	--	--	--	--	1,331	1,331
Sapling and seedling	--	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	--	--	--	1,330	1,331	2,661
White fir:						
Sawtimber	--	--	--	654	1,330	1,984
Poletimber	--	--	--	--	--	--
Sapling and seedling	--	--	--	--	654	654
Nonstocked	--	--	--	--	--	--
Total	--	--	--	654	1,984	2,638
Engelmann spruce:						
Sawtimber	--	--	1,295	1,295	2,259	4,849
Poletimber	--	--	--	--	2,661	2,661
Sapling and seedling	--	--	--	1,295	--	1,295
Nonstocked	--	--	--	--	--	--
Total	--	--	1,295	2,590	4,920	8,805
Pinyon-juniper:						
Sawtimber	--	--	--	--	568	568
Poletimber	--	--	--	--	198	198
Sapling and seedling	--	--	--	--	761	761
Nonstocked	--	--	--	--	199	199
Total	--	--	--	--	1,726	1,726
Total softwoods:						
Sawtimber	--	--	1,295	3,279	24,955	29,529
Poletimber	--	--	--	1,330	12,839	14,169
Sapling and seedling	--	--	--	1,295	4,895	6,190
Nonstocked	--	--	--	--	2,467	2,467
Total	--	--	1,295	5,904	45,156	52,355
Aspen:						
Sawtimber	--	--	--	1,330	--	1,330
Poletimber	--	--	--	1,071	--	1,071
Sapling and seedling	--	--	--	654	2,960	3,614
Nonstocked	--	--	--	--	--	--
Total	--	--	--	3,055	2,960	6,015
All types:						
Sawtimber	--	--	1,295	4,609	24,955	30,859
Poletimber	--	--	--	2,401	12,839	15,240
Sapling and seedling	--	--	--	1,949	7,855	9,804
Nonstocked	--	--	--	--	2,467	2,467
Total	--	--	1,295	8,959	48,116	58,370

Table 6.--Area of commercial timberland in Colfax County by forest type, stand-size class, and site class, private owned, 1976

Forest type and stand-size class	Site class					Total acres	
	: 165+	: 120-164	: 85-119	: 50-84	: 20-49		
- - - - - Acres - - - - -							
Douglas-fir:							
Sawtimber	--	--	--	--	32,104	32,104	
Poletimber	--	--	--	6,411	19,231	25,642	
Sapling and seedling	--	--	--	--	15,050	15,050	
Nonstocked	--	--	--	--	--	--	
Total	--	--	--	6,411	66,385	72,796	
Ponderosa pine:							
Sawtimber	--	--	--	--	201,458	201,458	
Poletimber	--	--	--	--	42,377	42,377	
Sapling and seedling	--	--	--	--	2,856	2,856	
Nonstocked	--	--	--	--	28,953	28,953	
Total	--	--	--	--	275,644	275,644	
Spruce-subalpine fir:							
Sawtimber	--	--	--	6,410	--	6,410	
Poletimber	--	--	--	--	6,410	6,410	
Sapling and seedling	--	--	--	--	--	--	
Nonstocked	--	--	--	--	--	--	
Total	--	--	--	6,410	6,410	12,820	
White fir:							
Sawtimber	--	--	--	2,856	6,410	9,266	
Poletimber	--	--	--	--	--	--	
Sapling and seedling	--	--	--	--	2,856	2,856	
Nonstocked	--	--	--	--	--	--	
Total	--	--	--	2,856	9,266	12,122	
Engelmann spruce:							
Sawtimber	--	--	5,261	5,261	7,772	18,294	
Poletimber	--	--	--	--	12,821	12,821	
Sapling and seedling	--	--	--	5,261	--	5,261	
Nonstocked	--	--	--	--	--	--	
Total	--	--	5,261	10,522	20,593	36,376	
Pinyon-juniper:							
Sawtimber	--	--	--	--	15,269	15,269	
Poletimber	--	--	--	--	7,996	7,996	
Sapling and seedling	--	--	--	--	3,164	3,164	
Nonstocked	--	--	--	--	7,996	7,996	
Total	--	--	--	--	34,425	34,425	
Total softwoods:							
Sawtimber	--	--	5,261	14,527	263,013	282,801	
Poletimber	--	--	--	6,411	88,835	95,246	
Sapling and seedling	--	--	--	5,261	23,926	29,187	
Nonstocked	--	--	--	--	36,949	36,949	
Total	--	--	5,261	26,199	412,723	444,183	
Aspen:							
Sawtimber	--	--	--	6,410	--	6,410	
Poletimber	--	--	--	2,819	--	2,819	
Sapling and seedling	--	--	--	2,856	17,795	20,651	
Nonstocked	--	--	--	--	--	--	
Total	--	--	--	12,085	17,795	29,880	
All types:							
Sawtimber	--	--	5,261	20,937	263,013	289,211	
Poletimber	--	--	--	9,230	88,835	98,065	
Sapling and seedling	--	--	--	8,117	41,721	49,838	
Nonstocked	--	--	--	--	36,949	36,949	
Total	--	--	5,261	38,284	430,518	474,063	

Table 7.--Area of commercial timberland in Colfax County by forest type, stand-size class, and site class, summary--State and private, 1976

Forest type and stand-size class	Site class					Total acres	
	165+	120-164	85-119	50-84	20-49		
Acres							
Douglas-fir:							
Sawtimber	--	--	--	--	34,648	34,648	
Poletimber	--	--	--	7,741	23,222	30,963	
Sapling and seedling	--	--	--	--	17,876	17,876	
Nonstocked	--	--	--	--	--	--	
Total	--	--	--	7,741	75,746	83,487	
Ponderosa pine:							
Sawtimber	--	--	--	--	219,712	219,712	
Poletimber	--	--	--	--	47,035	47,035	
Sapling and seedling	--	--	--	--	3,510	3,510	
Nonstocked	--	--	--	--	31,221	31,221	
Total	--	--	--	--	301,478	301,478	
Spruce-subalpine fir:							
Sawtimber	--	--	--	7,740	--	7,740	
Poletimber	--	--	--	--	7,741	7,741	
Sapling and seedling	--	--	--	--	--	--	
Nonstocked	--	--	--	--	--	--	
Total	--	--	--	7,740	7,741	15,481	
White fir:							
Sawtimber	--	--	--	3,510	7,740	11,250	
Poletimber	--	--	--	--	--	--	
Sapling and seedling	--	--	--	--	3,510	3,510	
Nonstocked	--	--	--	--	--	--	
Total	--	--	--	3,510	11,250	14,760	
Engelmann spruce:							
Sawtimber	--	--	6,556	6,556	10,031	23,143	
Poletimber	--	--	--	--	15,482	15,482	
Sapling and seedling	--	--	--	6,556	--	6,556	
Nonstocked	--	--	--	--	--	--	
Total	--	--	6,556	13,112	25,513	45,181	
Pinyon-juniper:							
Sawtimber	--	--	--	--	15,837	15,837	
Poletimber	--	--	--	--	8,194	8,194	
Sapling and seedling	--	--	--	--	3,925	3,925	
Nonstocked	--	--	--	--	8,195	8,195	
Total	--	--	--	--	36,151	36,151	
Total softwoods:							
Sawtimber	--	--	6,556	17,806	287,968	312,330	
Poletimber	--	--	--	7,741	101,674	109,415	
Sapling and seedling	--	--	--	6,556	28,821	35,377	
Nonstocked	--	--	--	--	39,416	39,416	
Total	--	--	6,556	32,103	457,879	496,538	
Aspen:							
Sawtimber	--	--	--	7,740	--	7,740	
Poletimber	--	--	--	3,890	--	3,890	
Sapling and seedling	--	--	--	3,510	20,755	24,265	
Nonstocked	--	--	--	--	--	--	
Total	--	--	--	15,140	20,755	35,895	
All types:							
Sawtimber	--	--	6,556	25,546	287,968	320,070	
Poletimber	--	--	--	11,631	101,674	113,305	
Sapling and seedling	--	--	--	10,066	49,576	59,642	
Nonstocked	--	--	--	--	39,416	39,416	
Total	--	--	6,556	47,243	478,634	532,433	

Table 8.--Area of commercial timberland in Colfax County by stand volume and ownership classes, 1976

Stand volume per acre ¹	Ownership class		
	State	Private	State and private
	Acres		
Less than 1,500 board feet	54,781	459,880	514,661
1,500 to 4,999 board feet	3,589	14,183	17,772
5,000 to 9,999 board feet	--	--	--
10,000 board feet or more	--	--	--
All classes	58,370	474,063	532,433

¹ International 1/4-inch rule.

Table 9.--Area of commercial timberland in Colfax County by forest type and area condition class; State and private, 1976

Forest type	Area condition class						Nonstocked	All classes
	10 : 20	30 : 40	50 : 60	70 : 80	90	Acres		
Douglas-fir	--	29,778	--	10,135	40,064	3,510	--	83,487
Ponderosa pine	--	--	8,194	68,572	134,795	24,432	34,264	301,478
Spruce-subalpine fir	--	15,481	--	--	--	--	--	15,481
White fir	--	3,510	--	7,741	--	3,509	--	14,760
Engelmann spruce	--	17,773	--	--	20,852	--	6,556	45,181
Pinyon-juniper	--	--	--	7,643	12,118	--	8,195	36,151
Total softwoods	--	66,542	--	15,935	107,202	190,486	27,942	39,416
Aspen	--	7,643	10,065	--	3,890	6,556	7,741	--
All types	--	7,643	76,607	--	19,825	113,758	198,227	27,942
								532,433
								215,469

Table 10.--Area of unproductive nonreserved forest land in Colfax County by forest type and ownership class, 1976

Forest type	Ownership class					
	State	Private	State and private			
Acres : Hectares	Acres : Hectares	Acres : Hectares	Acres : Hectares			
Pinyon-juniper	4,796	1,941	70,962	28,717	75,758	30,658
Mixed softwoods	7,297	2,953	110,425	44,688	117,722	47,641
Aspen	3,259	1,319	11,433	4,627	14,692	5,946
Mixed hardwoods	20,092	8,131	123,106	49,819	143,198	57,950
All types	35,444	14,344	315,926	127,851	351,370	142,195

Table 11.--Number of growing stock trees on commercial timberland in Colfax County by species and diameter class; State and private, 1976

Species	Diameter class (inches at breast height)										All classes		
	1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	12.0- 14.9	13.0- 16.9	14.0- 18.9	21.0- 20.9	23.0- 22.9	27.0- 24.9	29.0+ 28.9
Thousands trees													
Douglas-fir	6,788	2,641	2,706	2,241	1,213	483	446	134	23	34	19	9	--
Ponderosa pine	5,335	10,015	8,274	6,685	3,482	2,769	1,677	784	387	167	95	86	5
Limber pine	315	798	61	141	111	21	--	--	--	--	--	--	1,447
Subalpine fir	1,393	1,858	1,912	2,06	283	137	81	10	25	14	5	--	5,924
White fir	12,752	2,418	1,403	782	387	369	123	65	97	6	15	5	--
Engelmann spruce	7,574	9,700	2,895	1,769	1,955	705	259	162	30	14	20	--	18,422
Pinyon/juniper	1,209	3,856	1,430	843	169	102	57	46	--	--	--	--	25,083
Total softwoods	35,866	31,286	18,681	12,667	7,600	4,586	2,643	1,201	673	224	169	110	9
Aspen	6,939	5,567	1,886	1,578	905	150	95	23	8	--	--	--	--
All species	42,805	36,853	20,567	14,245	8,505	4,736	2,738	1,224	681	224	169	110	9
													132,878

Table 12.--Number of cull and salvable dead trees on commercial timberland in Colfax County by ownership class, and softwoods and hardwoods, 1976

Ownership class and species group	Sound	Cull trees	Total	Salvable dead trees
		Rotten		
- - - - - Thousand trees - - - - -				
State:				
Softwoods	5,147	50	5,197	274
Hardwoods	632	89	721	113
Total	5,779	139	5,918	387
Private:				
Softwoods	30,736	263	30,999	1,345
Hardwoods	3,168	435	3,603	408
Total	33,904	698	34,602	1,753
State and private:				
Softwoods	35,883	313	36,196	1,619
Hardwoods	3,800	524	4,324	521
Total	39,683	837	40,520	2,140

Table 13.—Net volume of growing stock on commercial timberland in Colfax County by ownership class, forest type, and stand-size class, 1976

Ownership class:	Forest type	Stand-size class		All classes
		Sawtimber : Poletimber	: Sapling/seedling: Nonstocked :	
- - - - - Thousand cubic feet - - - - -				
State:				Thousand cubic meters
Douglas-fir	1,900	2,524	733	5,157
Ponderosa pine	11,527	1,737	20	13,712
Spruce-subalpine fir	2,966	1,268	--	4,234
White fir	2,073	--	174	2,247
Engelmann spruce	5,862	3,037	859	9,758
Pinyon-juniper	102	47	33	9
Aspen	1,086	3,370	706	191
All types	25,516	11,983	2,525	5,162
				146
Private:				388
Douglas-fir	17,790	12,162	4,049	963
Ponderosa pine	121,055	16,762	89	4,042
Spruce-subalpine fir	14,292	6,108	--	578
White fir	9,803	--	759	299
Engelmann spruce	21,910	14,635	3,489	1,133
Pinyon-juniper	3,498	1,902	139	350
Aspen	5,234	8,815	3,798	5,889
All types	193,582	60,384	12,323	16,847
				167
State and private:				505
Douglas-fir	19,690	14,686	4,782	34,001
Ponderosa pine	132,582	18,499	109	142,723
Spruce-subalpine fir	17,258	7,376	--	20,400
White fir	11,876	--	933	10,562
Engelmann spruce	27,772	17,672	4,348	40,034
Pinyon-juniper	3,600	1,949	172	359
Aspen	6,320	12,185	4,504	6,080
All types	219,098	72,367	14,848	23,009
				172
				651
				1,109
				4,430
				698
				363
				1,410
				172
				651
				8,833

Table 14.-Net volume of sawtimber on commercial timberland in Colfax County by ownership class, forest type, and stand-size class, 1976

Ownership class:	Forest type	Stand-size class			All classes
		Sawtimber	Poletimber	: Sapling/seedling: Nonstocked	
- - - - Thousand board feet ¹ - - - -					
State:					
Douglas-fir	6,097	4,371	1,792	--	12,260
Ponderosa pine	47,556	4,068	63	2,165	53,852
Spruce-subalpine fir	12,570	1,231	--	--	13,801
White fir	8,128	--	471	--	8,599
Engelmann spruce	21,937	6,440	2,986	--	31,363
Pinyon-juniper	276	203	49	44	572
Aspen	3,191	3,244	1,070	--	7,505
All types	99,755	19,557	6,431	2,209	127,952
Private:					
Douglas-fir	64,106	21,060	10,520	--	95,686
Ponderosa pine	499,516	36,382	274	24,951	561,123
Spruce-subalpine fir	60,570	5,932	--	--	66,502
White fir	38,585	--	2,058	--	40,643
Engelmann spruce	82,775	31,036	12,129	--	125,940
Pinyon-juniper	9,615	8,174	204	1,777	19,770
Aspen	15,377	8,459	6,613	--	30,449
All types	770,544	111,043	31,798	26,728	940,113
State and private:					
Douglas-fir	70,203	25,431	12,312	--	107,946
Ponderosa pine	547,072	40,450	337	27,116	614,975
Spruce-subalpine fir	73,140	7,163	--	--	80,303
White fir	46,713	--	2,529	--	49,242
Engelmann spruce	104,712	37,476	15,115	--	157,303
Pinyon-juniper	9,891	8,377	253	1,821	20,342
Aspen	18,568	11,703	7,683	--	37,954
All types	870,299	130,600	38,229	28,937	1,068,065

¹ International 1/4-inch rule.

Table 15.--Net volume of growing stock on commercial timberland in Colfax County by species and diameter class; State and private, 1976

Species	Diameter class (inches at breast height)						All classes				
	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	17.0- 16.9	21.0- 20.9	23.0- 22.9	25.0- 24.9	27.0- 26.9	29.0+ 28.9
- - - - - Thousand cubic feet - - - - -											
Douglas-fir	4,205	8,082	8,123	5,535	6,856	2,885	3,649	1,025	1,930	1,193	655
Ponderosa pine	8,371	20,588	21,241	27,157	25,226	16,847	11,492	7,310	4,647	5,502	--
Limber pine	145	530	700	213	--	--	--	--	--	--	--
Subalpine fir	3,234	973	2,480	1,758	1,796	165	773	804	249	--	--
White fir	1,678	3,541	2,891	4,279	1,734	1,501	2,371	232	588	254	--
Engelmann spruce	5,186	7,784	16,992	10,228	5,367	4,873	789	405	1,350	--	--
Pinyon/juniper	741	1,204	655	493	749	578	--	--	--	--	--
Total softwoods	23,560	42,702	53,082	49,663	41,728	26,849	19,074	9,776	8,764	6,949	655
Aspen	3,672	9,554	9,353	2,611	1,835	537	189	--	--	--	--
All species	27,232	52,256	62,435	52,274	43,563	27,386	19,263	9,776	8,764	6,949	655

Table 16.--Net volume of sawtimber on commercial timberland in Colfax County by species and diameter class; State and private, 1976

Species	Diameter class (inches at breast height)						All classes				
	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9					
- - - - - Thousand board feet, International 1/4-inch rule - - - - -											
Douglas-fir	25,409	23,030	32,794	14,700	19,681	5,697	10,953	6,871	3,790	3,474	--
Ponderosa pine	75,289	124,211	130,623	93,847	65,776	42,696	27,546	32,987	--	4,921	142,925
Limber pine	2,395	828	--	--	--	--	--	--	--	--	3,223
Subalpine fir	10,616	8,496	9,212	851	3,971	4,126	1,285	--	--	--	38,557
White fir	11,560	18,961	7,924	6,799	10,421	969	2,383	1,006	--	--	60,023
Engelmann spruce	70,679	50,008	27,581	25,287	4,083	2,093	6,983	--	--	--	186,714
Pinyon/juniper	1,965	1,466	2,183	1,643	--	--	--	--	--	--	7,257
Total softwoods	197,913	227,000	210,317	143,127	103,932	55,581	49,150	40,864	3,790	3,474	4,921
Aspen	0	13,750	10,177	3,024	1,045	--	--	--	--	--	27,996
All species	197,913	240,750	220,494	146,151	104,977	55,581	49,150	40,864	3,790	3,474	4,921

Table 17.--Net volume of growing stock and sawtimber on commercial timberland in Colfax County by ownership class and species, 1976

		Species					
Ownership class:		Douglas-fir	Ponderosa	Limber	Subalpine	Pinyon/	All species
		pine	pine	fir	White fir	juniper	Aspen
GROWING STOCK							
State	4,974	13,421	311	2,245	3,235	9,894	305
Private	39,164	136,324	1,277	9,987	15,834	43,080	4,115
Total	44,138	149,745	1,588	12,232	19,069	52,974	4,420
GROWING STOCK							
State	141	380	9	64	92	280	8
Private	1,109	3,860	36	283	448	1,220	117
Total	1,250	4,240	45	347	540	1,500	125
SAWTIMBER							
State	14,252	53,864	641	7,228	10,288	35,486	521
Private	128,673	547,506	2,582	31,329	49,735	151,228	6,736
Total	142,925	601,370	3,223	38,557	60,023	186,714	7,257
						27,996	1,068,065
						786	8,833

Table 18.--Net volume of timber on commercial timberland in Colfax County by class of timber, and softwoods and hardwoods; State and private, 1976

Class of timber	Softwoods	Hardwoods	All classes
Sawtimber trees:			
Saw-log portion	202,082	4,878	206,960
Upper-stem portion	15,822	294	16,116
Total	217,904	5,172	223,076
Poletimber trees			
	66,262	22,579	88,841
All growing stock trees			
Sound cull trees	18,985	2,267	21,252
Rotten cull trees	1,177	1,143	2,320
Salvable dead trees	6,065	642	6,707
All timber	310,393	31,803	342,196

Table 19.--Net volume of growing stock on commercial timberland in Colfax County by forest type and species; State and private, 1976

Forest type	Douglas-fir	Ponderosa pine	Subalpine fir	Engelmann spruce	Pinyon-juniper	Total	Aspen	All species
								Thousand cubic meters
Species								
Douglas-fir	22,573	5,719	700	--	6,731	--	423	39,158
Ponderosa pine	15,594	137,922	--	--	1,205	--	1,598	156,319
Spruce-subalpine fir	182	2,214	8,702	--	7,884	--	15,338	24,222
White fir	1,035	213	145	963	2,567	2,995	34,195	42,898
Engelmann spruce	2,928	--	--	--	--	--	--	42,898
Pinyon-juniper	707	2,974	916	530	--	254	3,141	6,080
Aspen	1,119	--	--	--	--	--	--	6,080
All types	44,138	149,745	1,588	12,232	19,069	52,974	4,420	284,166
								311,917
								8,833
								8,833

Table 20.--Net volume of sawtimber on commercial timberland in Colfax County by forest type and species; State and private, 1976

Forest type	Species						All species
	Douglas-fir	Ponderosa pine	Limber pine	Subalpine fir	White fir	Total spruce : juniper; softwoods	
- - - - - Thousand board feet, International 1/4-inch rule - - - - -							
Douglas-fir	64,130	25,512	2,395	--	14,830	--	1,079
Ponderosa pine	59,454	549,344	--	--	3,164	--	3,013
Spruce-subalpine fir	--	--	--	28,206	--	52,097	--
White fir	3,834	10,486	--	4,032	29,845	--	48,197
Engelmann spruce	10,119	--	828	6,319	11,178	122,454	--
Pinyon-juniper	2,256	14,921	--	--	--	3,165	20,342
Aspen	3,132	1,107	--	--	1,006	12,163	--
All types	142,925	601,370	3,223	38,557	60,023	186,714	7,257
						1,040,069	27,996
							1,068,065

Table 21.--Net annual growth of growing stock and sawtimber on commercial timberland in Colfax County by ownership class and species, 1976

Ownership class	Species						All species
	Douglas-fir	Ponderosa pine	Limber pine	Subalpine fir	White fir	Total spruce : softwoods	
- - - - - Cubic feet - - - - -							
State	144,128	287,748	111,066	65,472	79,342	290,632	878,388
Private	1,042,846	3,176,791	48,407	295,017	392,496	1,423,055	6,378,612
Total	1,186,974	3,464,539	59,473	360,489	471,838	1,713,687	7,257,000
GROWING STOCK							
- - - - - Cubic meters - - - - -							
State	4,081	8,148	313	1,854	2,247	8,230	24,873
Private	29,530	89,957	1,371	8,354	11,114	40,296	180,622
Total	33,611	98,105	1,684	10,208	13,361	48,526	205,495
SAWTIMBER							
- - - - - Board feet, International 1/4-inch rule - - - - -							
State	444,868	1,177,012	34,260	400,372	180,883	1,716,165	3,953,560
Private	3,357,022	13,554,331	153,958	1,856,707	910,709	7,413,997	27,244,724
Total	3,801,890	14,729,343	188,218	2,257,079	1,091,592	9,130,162	650,232
							31,848,516

Table 22.--Annual mortality of growing stock and sawtimber on commercial timberland in Colfax County by ownership class, and softwoods and hardwoods, 1976

Species group and ownership class :	Growing stock	Sawtimber	
	- cubic feet-	- cubic meters -	Board feet ¹ -
Softwoods:			
State	94,940	2,688	337,535
Private	461,067	13,056	1,657,117
Total	556,007	15,744	1,994,652
Hardwoods:			
State	--	--	--
Private	--	--	--
Total	--	--	--

¹ International 1/4-inch rule.

Table 23.--Annual mortality of growing stock and sawtimber on commercial timberland in Colfax County by cause of death and species; State and private, 1976

Cause of death	Species						All species
	Douglas-fir	Ponderosa pine	Limber pine	Subalpine fir	White fir	Engelmann spruce	
GROWING STOCK <i>Cubic feet</i>							
Insects	--	--	--	--	--	--	--
Disease	--	--	--	--	--	--	--
Fire	32,202	--	--	--	66,083	--	98,285
Animal	--	--	--	--	--	--	--
Weather	--	--	--	--	--	--	--
Suppression	--	--	--	--	--	--	--
Unknown	--	288,968	--	--	60,584	--	349,552
Logging	--	108,170	--	--	--	--	108,170
Total	32,202	397,138	--	--	126,667	--	556,007
GROWING STOCK <i>Cubic meters</i>							
Insects	--	--	--	--	--	--	--
Disease	--	--	--	--	--	--	--
Fire	912	--	--	--	1,871	--	2,783
Animal	--	--	--	--	--	--	--
Weather	--	--	--	--	--	--	--
Suppression	--	--	--	--	--	--	--
Unknown	--	8,182	--	--	1,716	--	9,898
Logging	--	3,063	--	--	--	--	3,063
Total	912	11,245	--	--	3,587	--	15,744
SAWTIMBER <i>Board feet, International 1/4-inch rule</i>							
Insects	--	--	--	--	--	--	--
Disease	--	--	--	--	--	--	--
Fire	--	--	--	--	290,620	--	290,620
Animal	--	--	--	--	--	--	--
Weather	--	--	--	--	--	--	--
Suppression	--	--	--	--	--	--	--
Unknown	--	1,430,770	--	--	273,262	--	1,704,032
Logging	--	--	--	--	--	--	--
Total	--	1,430,770	--	--	563,882	--	1,994,652

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1980. Forest area and timber resource statistics for Col-
fax County, New Mexico, 1976. USDA For. Serv. Resour.
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